CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 91-100

SITE CLEANUP REQUIREMENTS FOR:

METROPOLITAN LIFE INSURANCE COMPANY
METROPOLITAN CORPORATE CENTER
3165 KIFER ROAD
SANTA CLARA, SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board) finds that:

1. **Site History** - Metropolitan Corporate Center (MCC), located at 3165 Kifer Road, Santa Clara, is an approximately 19 acre property that houses four large research and development buildings (Figures 1 and 2). In 1956, Southern Pacific Company acquired acreage north of Kifer Road, which was later divided into several tracts and known as Oakmead Industrial Park Unit No. 1. In 1968, the tract known as Assessor's Parcel 31 was conveyed to Sears, Roebuck and Company (Sears). Sears deeded it to O'Donnell, Hopkins & Partners/San Jose II, who conveyed it in 1985 to Metropolitan Life Insurance Company (hereinafter called the discharger), the present owner. Metropolitan Life Insurance Company (MLIC) leased MCC to 3COM Corporation from 1986 to 1991. The Software Publishing Company is the current tenant at the site.

2. **Previous Investigations** - Historical data from MCC indicate that groundwater beneath MCC is polluted with volatile organic compounds (VOCs) (see Finding 2.1). Data from a 1988 Regional Board contracted groundwater reconnaissance survey indicates that the VOC groundwater pollution plume may migrate from MCC offsite (refer to: "Collection and On-site Analysis of Soil Gas and Groundwater Samples at Selected Sites, as per Specifications in the State Water Resources Control Board Contract Number 7-706-120-0 National Environmental Testing, Inc. September 22, 1988"). In addition, a 10,000 gallon underground gasoline storage tank was excavated at MCC in 1984 (see Finding 2.2).

   Shallow groundwater reconnaissance surveys were conducted by Levine·Fricke on behalf of MLIC in 1989 and 1990 and by McCulley, Frick and Gilman on behalf of Reliance Technical Services (RTS) in 1990. Levine·Fricke concluded that the MCC plume is not migrating off of the MCC property. On the other hand, McCulley, Frick and Gilman concluded that, "The higher TCE concentrations and the northward to north-northeastward hydraulic gradient at MCC suggests that the TCE found on the RTS property has been transported in

shallow ground water from the MCC property". Currently the downgradient extent of the plume is undefined. Task 2 requires MLIC to install a sufficient number of wells to define the plume to at least the 5 ppb level for TCE.

2.1 **VOC Investigation** - In 1984, two groundwater monitoring wells were initially installed at MCC to establish a toxics baseline on the site prior to 3COM's occupancy. Eight additional wells were installed between 1985 and 1987 in an attempt to define the extent of VOC pollution discovered by these "baseline" wells. Data collected from well MMW-10 showed trichloroethene (TCE) at levels up to 150 parts-per-billion (ppb) and 1,2-dichloroethene (1,2-DCE) up to 51 ppb. A shallow groundwater reconnaissance sample collected in June 1989 showed TCE at 400 ppb.

To date no source for the VOCs in the groundwater has been found. No underground solvent storage tanks have been reported at the site. The horizontal and vertical extent of the groundwater pollution plume has not been adequately defined. Additional monitoring wells must be installed to define the extent of the plume. However, MLIC has collected 13 shallow groundwater reconnaissance samples which should reduce the number of monitoring wells that must be installed.

2.2 **Fuel Leak Investigation** - A 10,000 gallon underground gasoline storage tank used by Sears was excavated from the site in September 1984. No soil samples were collected from the excavation, because at the time, no samples were required unless there was an obvious hole in the tank or the soil around the tank smelled of gasoline. However, John Signorino, Fire Marshal for the Santa Clara Fire Department, recalled that while the tank appeared to be in good condition, he did observe groundwater in the bottom of the excavation and remembers some smell of gasoline. Groundwater samples from wells MMW-6 and MMW-7, both located downgradient from the reported location of the former underground storage tank, were analyzed for constituents of gasoline (BTEX) in 1985. BTEX was not detected in the groundwater samples from these two wells.

Task 1 requires that groundwater from all current and future onsite wells (with the exception of the two upgradient wells MMW-1 and 3) be analyzed for BTEX. Analysis for total petroleum hydrocarbons as diesel may also be requested based on a pending response from the former site owner regarding whether the tank was used to store diesel.

3. **Adjacent Micro Storage Corporation/Intel Magnetics Site** - A separate VOC groundwater pollution plume has been identified beneath a site located immediately east of the MCC site (see Figure 2). The site, known as the combined Micro Storage Corporation/Intel Magnetics site (MSC/IM) is a Federal Superfund site located at 2986 Oakmead Village Court and 3000 Oakmead

Village Drive. TCE has been detected in a MSC/IM groundwater monitoring well at a maximum level of 1400 ppb. A Remedial Investigation/Feasibility Study has been completed at the site.

A Final Remedial Action Plan (RAP) for the MSC/IM site is expected to be considered at the July 1991, Board meeting. Because the MCC plume and the MSC/IM plume are in close proximity to each other, Provision 2 of both the MSC/IM RAP and this Order require that the operation of any extraction system at the MCC and MSC/IM sites be done in a coordinated effort. This coordinated effort includes locating any extraction wells and selecting any associated pumping rates that maximize pollutant removal and minimize the hydraulic effects on the other site's groundwater plume.

While the lateral and vertical extent of the MCC plume has not been completely defined, data submitted on behalf of MCC and MSC/IM indicates that either the plumes are not commingled or they are only commingled near the lateral leading edge at levels less than approximately 50 ppb total VOCs. This Order includes a task that requires MLIC to install a minimum of one well located midway between MMW-10 and MMW-2 to aid in defining the northeast extent of the MCC plume.

The Board also recognizes that the northwest extent of the MSC/IM plume is also not well defined. The MSC/IM RAP will include a task that requires installation and sampling of a minimum of two new monitoring wells; one well located midway along a line between MMW-5 and the former location of IM-8, and one located midway along a line between MMW-9 and MMW-7.

4. **Site Hydrogeology** - Lithologic data collected from shallow borings (less than 50 feet deep) at and in the vicinity of MCC indicate that the near-surface sediments consist of alluvial deposits of interbedded, unconsolidated clay, silt, gravel and sand (J.V. Lowney, February, 1990). Based on water levels in the onsite monitoring wells and data from neighboring sites, shallow groundwater flow, beneath the site, is generally to the north-northeast. This flow regime is consistent with the northerly regional flow towards San Francisco Bay.

5. **Scope of this Order** - This Order contains tasks that require MLIC to: 1) define the horizontal and vertical extent of the VOC groundwater pollution plume by installing monitoring wells that adequately define the plume; 2) determine whether possible leaks from the former 10,000 gallon underground storage tank have affected the soil and/or groundwater; 3) conduct a vertical conduit study; and 4) develop a remedial action plan.

6. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986. The Basin Plan contains water quality objectives and beneficial uses for South San Francisco Bay and

contiguous surface and ground waters.

7. The existing and potential beneficial uses of the groundwater underlying and adjacent to the site include:

   a. Industrial process water supply
   b. Industrial service water supply
   c. Municipal and Domestic water supply
   d. Agricultural water supply

8. The discharger has caused or permitted, and threatens to cause or permit waste to be discharged or deposited where it is or probably will be discharged to waters of the State and creates or threatens to create a condition of pollution or nuisance.

9. This action is an order to enforce the laws and regulations administered by the Board. This action is categorically exempt from the provisions of the CEQA pursuant to Section 15321 of the Resources Agency Guidelines.

10. Interim containment and cleanup measures need to be implemented to alleviate the threat to the environment posed by the migration of pollutants and to provide a substantive technical basis for designing and evaluating the effectiveness of final cleanup alternatives.

11. The Board has notified the discharger and interested agencies and persons of its intent under California Water Code Section 13304 to prescribe Site Cleanup Requirements for the discharge and has provided them with the opportunity for a public hearing and an opportunity to submit their written views and recommendations.

12. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the discharger shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

1. The discharge of wastes or hazardous materials in a manner which will degrade water quality or adversely affect the beneficial uses of the waters of the State is prohibited.

2. Further significant migration of pollutants through subsurface transport to waters of the State is prohibited.

3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of pollutants are prohibited.

B. **SPECIFICATIONS**

1. The storage, handling, treatment or disposal of soil or groundwater containing pollutants shall not create a nuisance as defined in Section 13050(m) of the California Water Code.

2. The discharger shall conduct monitoring and investigatory activities as needed to define the current local hydrogeologic conditions, and the lateral and vertical extent of soil and groundwater pollution. Should monitoring results show evidence of pollutant migration, additional characterization of pollutant extent may be required.

C. **PROVISIONS**

1. The discharger shall submit to the Board acceptable monitoring program reports containing results of work performed according to a program as attached.

2. The discharger is required to conduct remedial activities in a coordinated effort with remedial activities at the combined MSC/IM site. This coordinated effort shall include locating any extraction wells and selecting any associated pumping rates such that both sites maximize pollutant removal and minimize the hydraulic effects on the other site's groundwater plume (See Finding 3).

3. The discharger shall comply with Prohibitions A.1., A.2., and A.3., and Specifications B.1. and B.2. above, in accordance with the following time schedule and tasks:

COMPLETION DATE/TASK

a. **COMPLETION DATE: July 26, 1991**

TASK 1: WORKPLAN FOR SOIL AND GROUNDWATER POLLUTION CHARACTERIZATION: Submit a technical report acceptable to the Executive Officer containing a proposal to define the horizontal and vertical extent of the groundwater pollution present in monitoring well MMW -10 by installing a sufficient

number of monitoring wells to define the plume to at least the 5 ppb level for TCE. The report shall also include proposed tasks to: 1) locate vadose zone sources of VOC groundwater pollution; 2) analyze groundwater samples from all current and future onsite wells (with the exception of the two upgradient wells MMW-1 and MMW-3) for BTEX. Analysis for total petroleum hydrocarbons as diesel may also be requested based on a pending response from the former site owner regarding whether the tank was used to store diesel; 3) compare the actual depth to the measured depth of all onsite monitoring wells and redevelop wells as necessary; 4) conduct a vertical conduit survey that covers an area extending 1/4 mile past site boundaries; and 5) sample all wells for priority pollutant metals.

b. **COMPLETION DATE: November 8, 1991**

TASK 2: COMPLETION OF SOIL AND GROUNDWATER CHARACTERIZATION: Submit a technical report acceptable to the Executive Officer documenting completion of the necessary tasks identified in the technical report submitted for Task 1.

c. **COMPLETION DATE: November 8, 1991**

TASK 3: INTERIM REMEDIAL ACTIONS: Submit a technical report acceptable to the Executive Officer which contains an evaluation of interim remedial alternatives, a recommended plan for interim remediation, and an implementation time schedule. This report shall evaluate the removal and/or cleanup of polluted soils and alternative hydraulic control systems to contain and to initiate cleanup of polluted groundwater. If this proposal includes the extraction of groundwater, the proposal shall describe the treatment and discharge of such extracted groundwater.

d. **COMPLETION DATE: February 28, 1992**

TASK 4: COMPLETION OF INTERIM REMEDIAL ACTIONS: Submit a technical report acceptable to the Executive Officer documenting completion of the necessary tasks identified in the technical report submitted for Task 3.

e. **COMPLETION DATE: July 12, 1992**

TASK 5: 1) EVALUATE INTERIM REMEDIAL ACTION MEASURES: Submit a technical report acceptable to the Executive Officer which evaluates the effectiveness of the interim

remedial actions. Such an evaluation shall include, but need not be limited to, an estimation of the flow capture zone of any extraction wells, establishment of any associated cones of depression by field measurements, and presentation of chemical monitoring data, if extraction wells are proposed. This report shall also evaluate and document the removal and/or cleanup of polluted soils, if such removal and/or cleanup is an element of the interim remedial measures.

2) MODIFICATION TO INTERIM ACTIONS: Specific modifications to the system and an implementation time schedule shall be proposed in the event that the soil remediation or hydraulic control system is demonstrated not to be effective in containing and removing the onsite pollutants.

f. **COMPLETION DATE: September 11, 1992**

TASK 6: COMPLETION OF MODIFICATIONS TO INTERIM ACTIONS: Submit a technical report acceptable to the Executive Officer documenting completion of the necessary tasks identified in the technical report submitted for Task 5.

g. **COMPLETION DATE: September 11, 1994**

TASK 7: PROPOSED FINAL CLEANUP OBJECTIVES AND ACTIONS: Submit a technical report acceptable to the Executive Officer containing the results of the remedial investigation; an evaluation of the installed interim remedial measures; a feasibility study evaluating alternative final remedial measures; the recommended measures necessary to achieve final cleanup objectives; and the tasks and time schedule necessary to implement the recommended final remedial measures. If this proposal includes the extraction of groundwater, the proposal shall describe the treatment and discharge of such extracted groundwater.

3. The submittal of technical reports evaluating immediate, interim and final remedial measures will include a projection of the cost, effectiveness, benefits, and impact on public health, welfare, and environment of each alternative measure. The remedial investigation and feasibility study shall consider the guidance provided by Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300); Section 25356.1 (c) of the California Health and Safety Code; CERCLA guidance documents with reference to Remedial Investigation, Feasibility Studies, and Removal Actions; and the State

Water Resources Control Board's Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California".

4. If the discharger is delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the discharger shall promptly notify the Executive Officer and the Board may consider revision to this Order.

5. Technical reports on compliance with the Prohibitions, Specifications, and Provisions of this Order shall be submitted monthly to the Board commencing on July 15, 1991 and covering the previous month, until the report for Task 6 is received and approved. On a monthly basis thereafter, these reports shall consist of a letter report that, (1) summarizes work completed since submittal of the previous report, and work projected to be completed by the time of the next report, (2) identifies any obstacles which may threaten compliance with the schedule of this Order and what actions are being taken to overcome these obstacles, and (3) includes, in the event of non-compliance with Provision C.2. or any other Specification or Provision of this Order, written notification which clarifies the reasons for non-compliance and which proposes specific measures and a schedule to achieve compliance. This written notification shall identify work not completed that was projected for completion, and shall identify the impact of non-compliance on achieving compliance with the remaining requirements of this Order.

6. The discharger shall comply with the self-monitoring program (Attachment) as adopted by the Board and may be amended by the Executive Officer. Following one year of quarterly monitoring and a written proposal from the discharger, the Executive Officer shall consider amending the Self-Monitoring Plan to allow for semi-annual monitoring.

7. The discharger shall submit quarterly technical reports summarizing the status of compliance with the Prohibitions, Specifications, and Provisions of this Order on a quarterly basis. These quarterly technical reports shall be submitted, according to the schedule below, commencing with the report for the third quarter 1991, due October 15, 1991. The quarterly technical reports are to be submitted as a part of the self-monitoring reports required in Attachment A, Section C.2.

QUARTER	First	Second	Third	Fourth
PERIOD	Jan.-March	April-June	July-Sept.	Oct.-Dec.
DUE DATE	April 15	July 15	October 15	January 15

The quarterly reports shall include;

a. a summary of work completed since the previous quarterly report, and work projected to be completed by the time of the next quarterly report,

b. water quality data for all existing and future A, B, and deeper zone monitoring and extraction wells as appropriate, including laboratory reports. See Table SMP-1 of Attachment A for list of monitoring wells and type of analysis,

c. appropriately scaled and labeled maps showing the location of all monitoring wells, extraction wells, and existing structures,

d. cross sections depicting subsurface geologic information and corresponding correlations based on boring data,

e. updated water table and piezometric surface maps for all affected water bearing zones, and isoconcentration maps for key pollutants in all affected water bearing zones,

f. a cumulative tabulation of all well construction data, groundwater levels and chemical analysis results for site monitoring wells specified in the sampling plan,

g. identification of potential problems which will cause or threaten to cause noncompliance with this Order and what actions are being taken or planned to prevent these obstacles from resulting in noncompliance with this Order, and

h. in the event of noncompliance with the Provisions and Specifications of this Order, the report shall include written justification for noncompliance and proposed actions to achieve compliance.

8. The discharger shall submit to the Board, according to the schedule shown below, technical reports acceptable to the Executive Officer containing a Sampling and Analysis Plan and a Health and Safety Plan.

The Sampling and Analysis Plan and a Health and Safety Plan format and contents shall consider CERCLA regulations and guidance documents.

Technical Report	Date Due
a. Sampling and Analysis Plan	July 26, 1991
b. Site Safety Plan	July 26, 1991

9. Any proposal for the discharge of extracted groundwater included in the technical report required in Task 3 and 7 must initially consider the feasibility of reclamation, reuse, or discharge to a publicly owned treatment works (POTW), as specified in Board Resolution No. 88-160. If it can be demonstrated that reclamation, reuse, or discharge to a POTW is technically and economically unfeasible, a proposal for discharge to surface water shall be considered. Such proposal for discharge shall include the above demonstration and a completed application for an NPDES permit.

10. If the discharger is delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the discharger shall promptly notify the Executive Officer and the Board may consider revision to this Order.

11. All hydrogeological plans, specifications, reports, and documents shall be signed by or stamped with the seal of a registered geologist, engineering geologist or professional engineer.

12. All samples shall be analyzed by State certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control records for Board review.

13. The discharger shall maintain in good working order, and operate, as efficiently as possible, any facility or control system installed to achieve compliance with the requirements of this Order.

14. Copies of all reports pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order, shall be provided to the following agencies:

    a. Santa Clara Valley Water District
    b. Santa Clara County Health Department
    c. City of Santa Clara

The Executive Officer shall receive one copy of all correspondence, reports and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order.

15. The discharger shall permit the Board or its authorized representative, in accordance with Section 13267(c) of the California Water Code:

    a. Entry upon premises in which any pollution sources exist, or may potentially exist, or in which any required records are kept, which are relevant to this Order.

    b. Access to copy any records required to be kept under the terms and conditions of this Order.

    c. Inspection of any monitoring equipment or methodology implemented in response to this Order.

    d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the discharger.

16. The discharger shall file a report on any changes in site occupancy and ownership associated with the site described in this Order.

17. Pursuant to Water Code Section 13304(c), the discharger shall be liable and shall reimburse the Regional Board for all reasonable staff oversight costs incurred relating to cleanup of waste on this site, abating the effects thereof, or taking other remedial action.

18. If any hazardous substance, as defined pursuant to Section 25140 of the Health and Safety Code, is discharged in or on any waters of the state, or discharged and deposited where it is, or probably will be discharged in or on any waters of the state, the discharger shall report such discharge to this Board, at (415) 464-1255 on weekdays during office hours from 8 a.m. to 5 p.m., and to the Office of Emergency Services at (800) 852-7550 during non-business hours. A written report shall be filed with the Board within five (5) working days and shall contain information relative to: the nature of waste or pollutant, quantity involved, duration of incident, cause of spill, Spill Prevention, Control, and Countermeasure Plan (SPCC) in effect, if any, estimated size of affected area, nature of effect, corrective measures that have been taken or planned, and a schedule of these activities, and persons/agencies notified.

19. The Board will review this Order periodically and may revise the requirements when necessary.

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on June 19, 1991.

Steven R. Ritchie
Executive Officer

Attachments: Figure 1 - Regional Map
Figure 2 - Site Map
Attachment A - Self-Monitoring Program

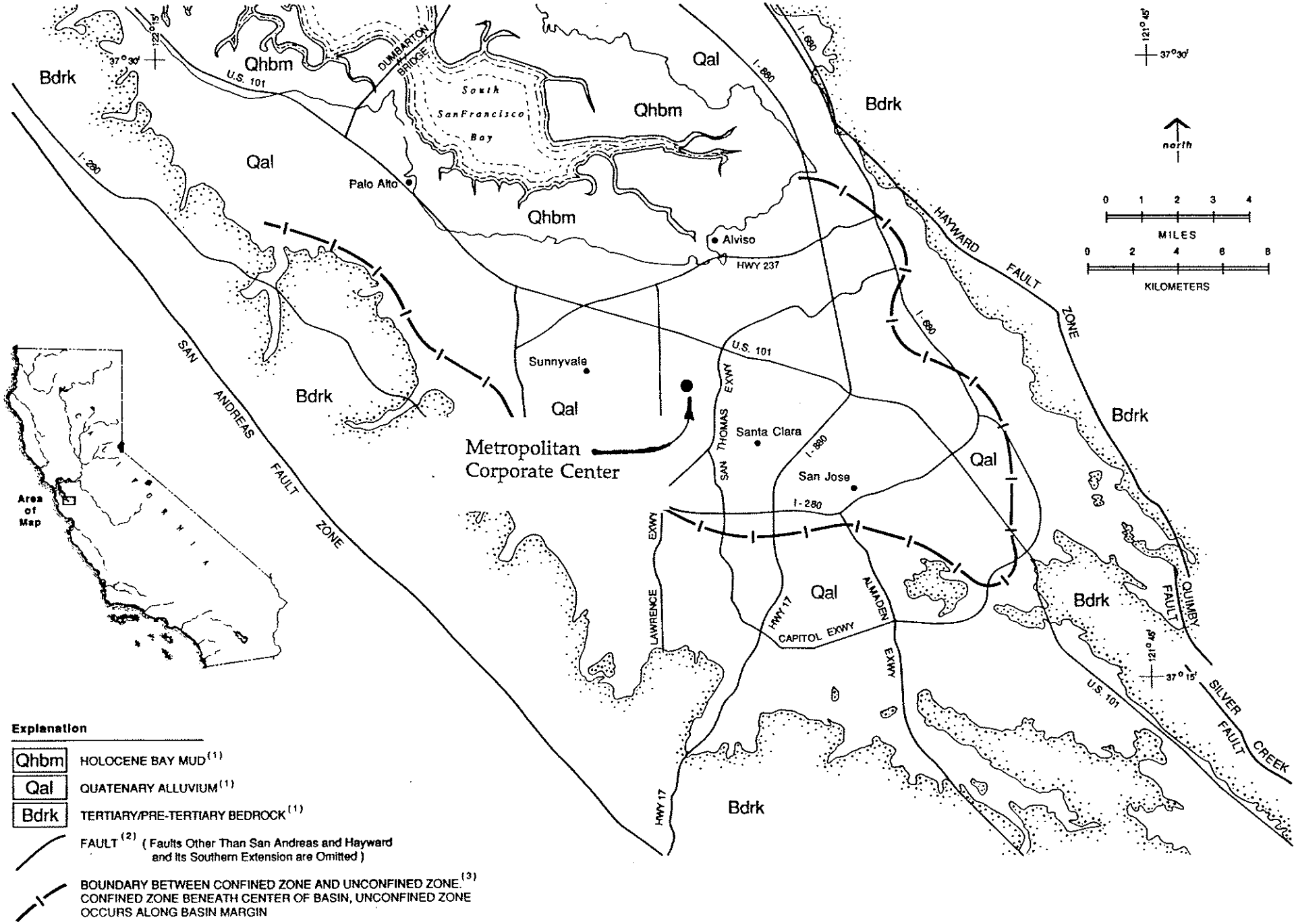
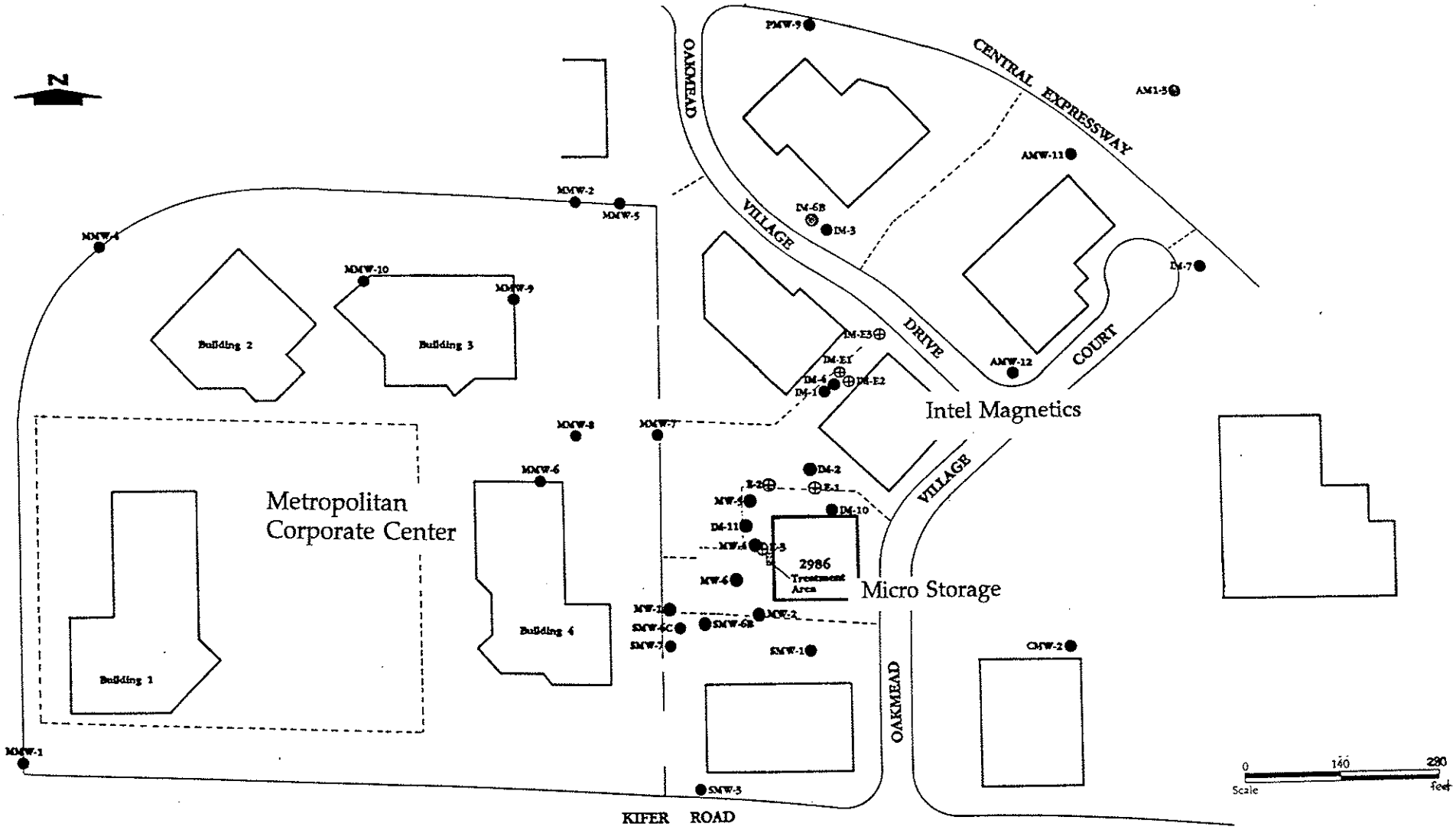


Figure 1. Regional Map showing location of the Metropolitan Corporate Center.



LEGEND

- ● - Approximate location of monitoring well
- ⊕ - Approximate location of extraction well

Figure 2. Site map of the Metropolitan Corporate Center and adjacent Micro Storage/Intel Magnetics Site.

ATTACHMENT A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 91-100

GROUNDWATER SELF-MONITORING PROGRAM

METROPOLITAN LIFE INSURANCE COMPANY
METROPOLITAN CORPORATE CENTER
3165 KIFER ROAD
SANTA CLARA, SANTA CLARA COUNTY

A. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13268, 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16.

The principal purposes of a waste discharger's monitoring program, also referred to as a self-monitoring program, are: (1) To document compliance with site cleanup requirements and prohibitions established by this Regional Board, (2) To facilitate self-policing by the waste dischargers in the prevention and abatement of pollution arising from waste discharge, (3) To develop or assist in the development of effluent or other limitations, discharger prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards, and (4) To prepare water and wastewater quality inventories.

B. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to the EPA Method 8000 series described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," dated November 1986; or other methods approved and specified by the Executive Officer of this Regional Board.

C. REPORTS TO BE FILED WITH THE REGIONAL BOARD

1. Violations or Potential Violations of Requirements

a. The discharger shall file a written technical report at least 15 days prior to advertising for bid on any construction project which may potentially adversely effect the discharger's soil and groundwater cleanup activities. All projects involving subsurface construction shall be reported.

b. In the event the discharger is unable to comply with the conditions of the site cleanup requirements and prohibitions due to:

(1) maintenance work, power failures, or breakdown of any waste treatment equipment, or

(2) accidents caused by human error or negligence, or

(3) other causes such as acts of nature, or poor operation or inadequate system design,

the waste discharger shall promptly accelerate the pertinent portions of the monitoring program to weekly or as required by the Regional Board's Executive Officer for those constituents which have been violated. Such analysis shall continue until such time as the discharger is back in compliance with the conditions and prohibitions of the site cleanup requirements, or until such time as the Executive Officer determines to be appropriate. The results of such monitoring shall be included in the regular Self-Monitoring Report.

2. Self-Monitoring Reports

a. Reporting Period:

Written reports shall be filed regularly each quarter within fifteen days from the end of the quarter monitored. The first quarterly report is due October 15, 1991.

b. Letter of Transmittal:

A letter transmitting self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period and actions taken or planned for correcting any requirement violation. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to this correspondence will be satisfactory. Monitoring reports and the letter transmitting reports shall be signed by either a principal executive officer or his duly authorized employee. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true and correct.

c. Data Results:

(1) Results from each required analysis and observation shall be submitted in the quarterly self-monitoring regular reports. Results shall also be submitted for any additional analyses performed by the discharger at the specific request of the Regional Board. Quarterly water level data shall also be submitted in the quarterly report.

(2) The quarterly report shall also identify the analytical procedures used for analyses either directly in the report or by reference to a standard plan accepted by the Regional Board's Executive Officer. Any special methods shall be identified and shall have prior approval of the Executive Officer.

(3) Original lab results shall be retained and shall be made available for inspection for six years after origination or until after all continuing or impending legal or administrative actions are resolved.

(4) Maps shall accompany the quarterly report, showing sampling locations and pollutant plume contours.

(5) The discharger shall describe in the quarterly monitoring report the effectiveness of the actions taken to regain compliance if compliance is not achieved. The effectiveness evaluation shall include the basis of determining the effectiveness, water surface elevations for each well used to determine water surface elevation contours and water quality data.

(6) The annual report shall be combined with the quarterly report submitted on January 31, of each year and shall include cumulative data for the current year for each chemical present above detectable concentrations. The annual report shall also include minimum, maximum, median and average water quality data for the year. Water level data and GC/MS results shall be included in the annual report. The annual report shall also include contour maps for each chemical present above detectable concentrations.

d. Self-Monitoring Program (SMP) Revisions:

Additional long term or temporary changes in the sample collection frequency and routine chemical analysis may become warranted as monitoring needs change. These changes shall be based on the following criteria and shall be proposed in a quarterly report. The changes shall be implemented no earlier than 45 days after a self-monitoring report is submitted for review or not at all if the proposal is found to be unacceptable by the Regional Board's Executive Officer.

Criteria for SMP revisions:

(1) Discontinued analysis for a routine chemical parameter for a specific well after a one-year period of below detection limit values for that parameter.

(2) Changes in sampling frequency for a specific well after a one-year period of below detection limit values for all chemical parameters from that well.

(3) Temporary increases in sampling frequency or changes in requested chemical parameters for a well or group of wells because of a change in data needs (e.g., evaluating groundwater extraction effectiveness or other cleanup strategies).

(4) Add routine analysis for a chemical parameter if the parameter appears as an additional chromatographic peak in three consecutive samples from a particular well.

(5) Add routine chemical parameters for new wells based on the results of initial GC/MS analysis.

(6) Alter sampling frequency based on evaluation of collective data base.

(7) Following a temporary increase in sampling frequency, as described in C.1, the regular sampling frequency will resume after 4 samples show stable or decreasing concentrations provided the sampling indicates compliance with the Site Cleanup Requirements.

D. DESCRIPTION OF GROUNDWATER SAMPLING STATIONS

All groundwater monitoring wells as listed in Table SMP-1 and as shown on Figure SMP-1.

E. SCHEDULE AND CONDITIONS OF SAMPLING AND ANALYSIS

The schedule and conditions of sampling and analysis shall be as given herein and as shown on Table SMP-1:

1. For any new extraction or monitoring well that may be constructed, sampling and analysis shall be conducted on a quarterly schedule for a term to be decided by the Regional Board's Executive Officer but not less than one year. A GC/MS analysis shall be performed on each new well immediately after installation and well development and all peaks identified and reported on each well in the next quarterly report.

2. If a previously undetected compound or peak is detected in a sample from a well, a second sample shall be taken within a week after the results from the first sample are available. All chromatographic peaks detected in two consecutive samples for purgeable halocarbons and/or volatile organics shall be identified and quantified in the quarterly report.

3. A GC/MS analysis shall be performed annually and all peaks identified and reported for any operating extraction wells and pits.

4. All chemical analyses shall have detection limits below the state action level for water for all constituents analyzed.

5. Groundwater elevations shall be obtained and reported on a quarterly basis from each monitoring and extraction well listed in Table SMP-1. In addition, the depth of the pump in any extraction wells shall be obtained and submitted in the quarterly report with the sampling results.

6. Depths of wells in Table SMP-1 shall be determined on an annual basis and compared to the depth of the well as constructed. The results of this comparison shall be reported in the annual report specified in C.2.c.(6).

I, Steven R. Ritchie, Regional Board Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data to determine compliance with Regional Board Order No. 91-100.

2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

Effective Date: June 19, 1991

Steven R. Ritchie
Executive Officer

Attachments: Figure SMP-1 - Facility map including well locations
Table SMP-1 - Schedule for Sampling, Measurements, and Analysis

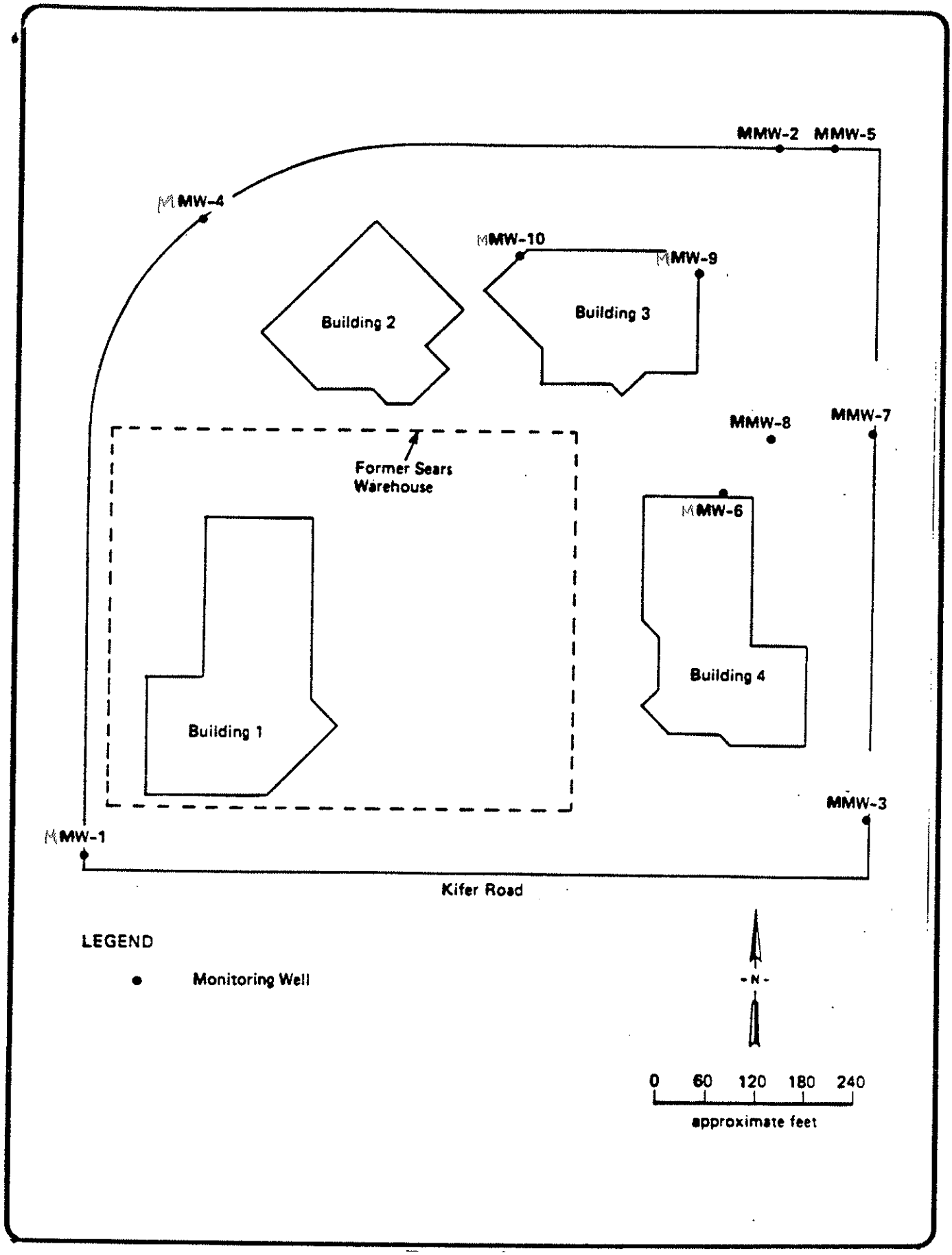


Figure SMP-1. Facility map including monitoring well locations.

TABLE SMP-1

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS
GROUNDWATER SELF-MONITORING PROGRAM

Metropolitan Life Insurance Company
Metropolitan Corporate Center
3165 Kifer Road
Santa Clara, Santa Clara County

Quarter:	**First** (January-March)
Sampling Station:	MMW-1,4,6,9,10 and all future groundwater monitoring wells and extraction wells.
Type of sample:	Grab sample
Type of analysis:	EPA Method 8240 with analysis for Freon 113
Quarter:	**Second** (April-June)
Sampling Station:	MMW-9 and 10 and all future groundwater monitoring wells and extraction wells.
Type of sample:	Grab sample
Type of analysis:	EPA Method 8010 with analysis for Freon 113
Quarter:	**Third** (July - September)
Sampling Station:	MMW-9 and 10 and all future groundwater monitoring wells and extraction wells.
Type of sample:	Grab sample
Type of analysis:	EPA Method 8010 with analysis for Freon 113
Quarter:	**Fourth** (October - December)
Sampling Station:	MMW-9 and 10 and all future groundwater monitoring wells and extraction wells.
Type of sample:	Grab sample
Type of analysis:	EPA Method 8010 with analysis for Freon 113